UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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CHICAGO, IL 60604-3590

APR 0 6 2005

REPLY TO THE ATTENTION OF:
R-19J

Mr. Philip Smithmeyer
Chicago Airports District Office Manager
Federal Aviation Administration, Chicago Airports District Office
2300 East Devon Avenue
Des Plaines, Illinois 60018

Re: Comments on the O'Hare Airport Modernization Draft Environmental Impact Statement (DEIS), Cook and DuPage Counties, Illinois, EIS No. 050018

Dear Mr. Smithmeyer:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the United States Environmental Protection Agency (EPA) Region 5 has reviewed the O'Hare Airport Modernization Draft Environmental Impact Statement (DEIS). The Federal Aviation Administration (FAA) evaluated several O'Hare build alternatives in detail in the DEIS but has not identified a preferred alternative.

EPA began working with FAA on O'Hare airport issues prior to July 2002, when FAA published a notice of intent to issue an environmental impact statement and a scoping notice. O'Hare's location in the Midwest, its role as a dual-hub airport with a high percentage of connecting passengers, and its large role providing service to the U.S.'s third largest metropolitan area magnify the impact of the delay problems that the airport experiences. Delays at O'Hare often have a ripple effect across the National Airspace System, especially in poor weather conditions. The proposed project is intended to (1) address the projected needs of the Chicago region by reducing delays at O'Hare, thereby enhancing the capacity of the National Airspace System, and (2) ensure that existing and future terminal facilities and supporting infrastructure can efficiently accommodate airport users. We believe the FAA and the sponsor have made a credible case for the need for action to alleviate the problems at O'Hare.

We have had discussions with FAA regarding FAA's approach to the alternatives analysis, including how the use of other airports would be evaluated. We agree with FAA's approach and decision for retaining the three O'Hare build alternatives—Alternative C (the City of Chicago's proposed alternative), Alternative D, and Alternative G—for detailed evaluation. Additionally, the EPA has worked with FAA on scoping the needed impact analyses for evaluating air and water quality and, to a limited extent, noise.

Our environmental concerns have been summarized in two general categories: impact analysis and mitigation measures. Our detailed comments are enclosed.

Impact Analysis

The DEIS includes substantial analysis of environmental impacts associated with O'Hare modernization alternatives, acknowledging impacts that the build alternatives will have in the areas of air quality, water quality, wetlands, noise, and environmental justice. We commend FAA for this analysis, and we recommend that FAA undertake selected additional analyses to fully disclose impacts. We recommend that the FEIS include:

- A General Conformity Analysis.
- A fine particulate matter (PM2.5) analysis.
- An expanded environmental justice analysis including other impact categories, such as air quality.

Mitigation Measures

We recommend that the FEIS evaluate mitigation options in more detail. The DEIS disclosed some mitigation options that may be considered, but did not evaluate them for their effect on reducing O'Hare's environmental footprint. The DEIS lacks specific mitigation commitments to address significant environmental issues. We recommend the development and implementation of a comprehensive mitigation plan. The FEIS should include the following mitigation measures that would reduce the environmental impact of the build alternatives:

- Specific air mitigation measures, including a comprehensive diesel emissions reduction program and measures to address hazardous air pollutants (HAP) emissions from aircraft taxiing and idling.
- The use of higher mitigation ratios to offset impacts to wooded wetlands.
- A detailed evaluation of specific noise mitigation measures and a timeline for implementation of those measures.

We note that the City of Chicago has developed several key documents to guide the O'Hare Modernization Program (OMP) work, including the Sustainable Design Manual and drafts of a Green Airport Initiatives Environmental Best Management Practices (BMP) Manual. We commend the City of Chicago for undertaking this effort. We strongly recommend that the FAA work with the City of Chicago to minimize impacts from the proposed project should one of the build alternatives move forward. We also recommend that commitments to implement specific green design, construction, and operation practices be included in the FEIS. We offer our assistance to work with you to help you achieve your goals.

O'Hare has the opportunity to be a leader in green airport design, construction, operation, and maintenance. We recommend that the City of Chicago consider implementation of an Environmental Management System (EMS). We believe the elements of an EMS, such as planning, goal-setting, program implementing, measuring progress, and corrective action, would set the stage for O'Hare becoming a model green airport. An EMS would also provide a mechanism to track long-term mitigation measures associated with this project. We believe that this approach is consistent with the City's environmental philosophy and practice in promoting green initiatives.

Based on our review of the information provided in the DEIS and the comments we have provided on air quality, wetlands, water quality, noise, environmental justice, and alternatives evaluation, we have rated the DEIS as EC-2. The "EC" means that we have environmental concerns with respect to the proposed action, and the "2" indicates that additional information needs to be provided in the Final Environmental Impact Statement (FEIS) to alleviate these environmental concerns. Our rating applies to each of the build alternatives presented in the DEIS. We have enclosed a summary of EPA's rating system under NEPA.

Thank you for the opportunity to comment on the DEIS for this project. We are confident that by continuing to work closely and collaboratively with FAA and the City of Chicago, our concerns will be addressed and reflected in the forthcoming FEIS and Record of Decision. We are willing to meet and discuss our concerns with you. If you have any questions, please contact me. The staff person assigned to this project is Sherry Kamke; she can be reached at (312) 353-5794 or via email at kamke.sherry@epa.gov.

Very truly yours,

Bharat Mathur
Acting Regional Administrator

Enclosures (2)

1) EPA's Detailed Comments on the DEIS
2) EPA's Summary of NEPA Rating Definitions and Followup Actions

Comments on the O'Hare Modernization Draft Environmental Impact Statement (DEIS) Cook and DuPage Counties, Illinois

Air Quality

Criteria Pollutants

We note that FAA intends to address the General Conformity requirements in a separate document rather than in the DEIS and that FAA expects the General Conformity documentation to be completed in Spring 2005. We look forward to reviewing the General Conformity documentation when it is prepared. Please note that the General Conformity documentation requires a public comment review period and that the General Conformity determination must be completed prior to a Record of Decision being issued.

Meteorological Data and Modeling

In Appendix J, the DEIS states that one year of meteorological data was initially selected because it represented worst-case weather conditions. (The EPA's Guideline of Air Quality Models states that five years of meteorological data should be used to ensure that the variability in weather conditions is adequately captured.) It is EPA's understanding that the year 1990 was selected after a screening analysis indicated that it would produce the highest modeled predictions among the five years of data examined. Also, the report states that if the results of the modeling were within 10% of the National Ambient Air Quality Standards (NAAQS), the modeling would be conducted with the additional four years of data to ensure that the highest concentrations were predicted. The results of this additional modeling, as well as the results of the screening analysis, could not be found in the DEIS. The results of the screening analysis and the results from the remaining four years of meteorological data need to be reviewed to determine if alternative variability has been adequately considered. We are unable to verify that the year chosen represents the worst case for all alternatives. The results from the screening analysis should be included in the FEIS.

Appendix J in the DEIS states that the receptor grid resolution is roughly 1000 feet around the perimeter of the property and that additional receptors were placed within the property as well as in areas of maximum predicted concentrations. It is not clear where the additional, discrete receptors were placed to ensure reasonable characterization of the peak concentrations. Standard practice with regulatory modeling is to use 100 meters or less spacing at the fence line. Modeling should be run using 100-meter receptor spacing, and modeling results should be included in the FEIS.

Carbon Monoxide

As noted in Table 5.6-23, the maximum carbon monoxide (CO) concentration for Alternative A (No Action) is 9.0 parts per million (ppm) at the intersection of Mannheim Road and Lawrence Avenue. The CO NAAQS eight-hour standard is 9 ppm. All of the Build Alternatives (Alternatives C, D, and G) include a project that would add an exclusive southbound left turn lane at this location, bringing the 8-hour concentration down to 7.1 ppm. Although the DEIS indicates that the predicted eight-hour concentrations of carbon monoxide are not predicted to exceed the NAAQS, the levels could be close enough to cause

a violation of the CO standard under the No Action alternative. FAA should address measures that will be considered to avoid a potential violation of the CO standard if the No Action alternative were selected.

Particulate Matter- 2.5 microns or less (PM2.5)
On January 5, 2005, the Chicago metropolitan area was designated as nonattainment for the PM2.5 NAAQS. This designation will be effective on April 5, 2005. The State of Illinois is required to develop a plan to address the PM2.5 NAAQS by April 2008. Throughout Chapter 5.6 of the DEIS, all tables entitled, "Airport Related Emissions Inventories" fail to include PM2.5 emissions. Because this project is located in the Chicago PM2.5 nonattainment area, PM2.5 emissions need to be included to evaluate different alternatives and potential mitigation measures.

Particulate Matter – 10 microns or less (PM10) and PM2.5
In Appendix J, p. J-48, the estimation methodology for particulate matter (PM) emissions from aircraft engines is described. That method, an acknowledged interim approach, is FAA's first-order approximation (FOA): Emission Index Particulate Matter (EIPM) = 0.6 x SN, where SN is the smoke number. We remain concerned that the approximation does not include the volatile portion of particulate matter emissions. Further, this methodology is not consistent with EPA's quantification for other mobile PM sources. The NAAQS for PM is based on a consideration of both volatile and non-volatile PM; for health effects both must be considered. Initial results from recent testing at the National Aeronautics and Space Administration (NASA) Dryden Flight Research Center suggest that the PM emissions contain a significant volatile component. EPA and FAA participated in and helped to fund this NASA research. This under-accounting, which could potentially underpredict the total PM emissions from aircraft engines, should be mentioned in the FEIS. From FAA's air quality analysis, it does not appear that aircraft are a major contributor to overall PM emissions specifically in the vicinity of O'Hare under the various scenarios and Alternatives, but a brief sensitivity analysis should be undertaken. FAA should present different approaches that illustrate the range of estimates available for the PM aircraft contribution. FAA could apply EPA's methodology for our 2002 National Emissions Inventory, or other methods such as including early information from NASA Dryden or other recent testing that would show that particulate matter from aircraft contains more than only the black carbon component.

Further, with respect to PM2.5 and the above-mentioned PM emissions estimation, recent literature, test data, and the FAA report, "A Review of Literature on Particulate Matter Emissions from Aircraft" all suggest that almost all PM emissions from aircraft engines are PM2.5. EPA will be using a PM2.5 fraction of 97.6 percent in the aircraft engine portion of its 2002 National Emissions Inventory. As noted above, there is no PM2.5 component to the Air Quality section of the DEIS (outside of construction emissions). The FEIS should include these estimations when analyzing for the contributions that aircraft engines make to PM2.5 and PM10.

Hazardous Air Pollutants (HAPs)

We commend FAA for including an analysis of non-criteria hazardous air pollutants (HAPs) in the DEIS. FAA's responsiveness has been informative and has advanced our collective understanding of current and potential future conditions with respect to HAPs in the O'Hare study area. By quantifying and toxicity-ranking the emissions, several pollutants and sources were shown to be contributors to the HAPs scenario.

We suggest that the HAPs chapter could be enhanced by linking potential mitigation measures to the most significant priority-ranked HAPs and their source categories. Additionally, we recommend that the following issues be addressed in the FEIS:

- In the Executive Summary, p. ES-30, section D.5, Supplemental Air Quality Analysis, the FAA states, "...the [HAPs-related] influence of the proposed airport development on the health of those living in the vicinity of O'Hare cannot currently be quantified in a meaningful way." We recommend that the FEIS clarify that this is in large part because current and future hazardous air pollutant emission estimates for commercial jet aircraft engines are so uncertain.

- In Appendix I, p. I-1, paragraph 2, Introduction, we recommend clearer language, such as: "...Collectively, the agencies believe that, given the absence of HAP emissions data and the limitations of HAP speciation profiles for commercial jet aircraft engines, an accurate emissions inventory (the first step in a sound human health risk assessment) cannot be accomplished..."

- In Appendix I, p. I-114, the last paragraph under Diesel Particulate Matter section includes two incorrect statements. "The EPA has assigned diesel particulate matter classification B1; ..." and "The EPA has assigned an inhalation carcinogenic unit risk factor..." The statements in the paragraph probably refer to California EPA. EPA has not assigned a unit risk factor to diesel PM. There is, however a unit risk factor developed by the California EPA as you have referenced in footnote 98. EPA has not classified diesel PM, but has concluded that diesel exhaust (containing the gaseous and particle phases) is "likely to be carcinogenic to humans by inhalation" (EPA Health Assessment Document for Diesel Engine Exhaust, EPA/600/8-90/057F, p.1-4). We recommend that this change be reflected in the FEIS.

Mitigation

With the magnitude of the proposed modernization, O'Hare has the opportunity to be a national leader for environmental stewardship. We believe that potential mitigation measures and their benefits should be more thoroughly described and quantified, and that firmer commitments should be made. We strongly support the air quality mitigation measures listed in Chapter 5 and Chapter 7 and encourage FAA and the City of Chicago to commit to implementing them as fully as possible.

The specific mitigation measures we propose address both criteria and hazardous air pollutants. The toxicity-ranked HAPs analysis shows that several pollutants and sources are clearly the most important contributors. In particular, diesel emissions, which also contribute

to nitrous oxides (NOx), PM10, and PM2.5, can cause serious adverse health and environmental effects and were identified as a driver in the Hazardous Air Pollutant analysis. During the building phases, construction equipment is the largest contributor to diesel emissions. At Build-Out and beyond, operations-related ground support equipment (GSE) is projected to be the main contributor to diesel particulate matter at O'Hare, assuming one of the build alternatives is implemented. We encourage FAA to work with the City of Chicago to assess options for a comprehensive Airport Diesel Emissions Reduction Program that would address diesel emissions from multiple source categories in construction, ground transportation, and airport operations. Such a program would include at a minimum:

- Required usage of low sulfur or ultra-low sulfur fuels and construction equipment fitted with EPA or California Air Resource Board (CARB)-verified retrofit technologies. Under a build scenario, there will be as many pieces of diesel construction equipment on site over an eight year construction period.

- Conversion of all diesel ground support equipment to compressed natural gas, propane, or electric power.

- Alternate fuel and retrofits for internal bus and shuttle transportation.

- Time and transportation management practices and oversight that would minimize idling and queuing of diesel construction equipment and ground support equipment.

We understand that there are many factors to consider, such as ability to implement a change, commercial availability of options, and anticipated benefits versus implementation costs. We stand ready to assist in evaluating the results of the HAPs priority ranking and in identifying and evaluating mitigation options.

We note that although HAPs from motor vehicles will decrease as a result of national mobile source reduction mandates, HAPs from aircraft operations may increase. This is because the overall number of aircraft operations will increase in the future. It is not clear how technological advances in aircraft engines will affect HAP emissions in the future. The DEIS assumes that no significant improvement in HAPs emissions will occur, although it is likely that improvements in technology will actually occur and that such improvements will lead to lower HAP emissions. While we acknowledge that HAPs from aircraft operations are harder to mitigate because the FAA and the City often do not have the authority to mandate or implement changes, the FEIS should evaluate what mitigation measures could reduce the emissions of HAPs from airport operational activities at O'Hare. We believe that auxiliary power units (APU) usage is a key area to consider when evaluating HAPs reduction potential from aircraft operations. We encourage FAA and the City of Chicago to fully commit to modernizing 100% of O'Hare's gates and other operational areas with utility connections to reduce APU usage. Additionally, since most HAPs from aircraft are emitted during the idling mode, it is important to encourage the airlines to adopt practices to reduce jet aircraft idling.

Finally, we note that the practices outlined in the OMP Sustainable Design Manual (e.g., green building design, use of low-volatile organic compound (VOC) materials, Stage II vapor

recovery, alternative construction transportation strategies) reduce emissions of both criteria pollutants and HAPs and should be implemented.

Wetlands

Wetland Impact Analysis

The DEIS looked at four alternatives in detail, Alternative A (the No action alternative) and Alternatives C, D, and G. The no action alternative would impact approximately 23 acres of wetlands and other waters of the United States. These impacts would be the result of either on-going projects or projects that would be undertaken regardless of whether or not the O'Hare Modernization Program is approved. Under the three build alternatives C, D, and G, the impacts to aquatic resources are essentially the same as one another, but greater than Alternative A. The DEIS states that the opportunity to avoid and minimize impacts under a build scenario is essentially nonexistent due to the lack of upland open space and the requirements associated with constructing any of the build alternatives, while still maintaining existing service at O'Hare. We also recognize that existing wetlands and waters of the United States at O'Hare present risks of waterfowl-aircraft strikes that FAA is seeking to minimize. The comments that follow apply to Alternatives C, D, and G.

The project site currently includes approximately 155 acres of wetlands and other waters of the United States, which include 24.8 acres of wetland that were restored/created as mitigation for construction of the post office complex at the south end of the airport. The majority of the wetland areas on the project site are small, between 1 and 2 acres in size with low plant diversity. Two of the larger areas (NW 28 and SW 15) have more diverse wetland plant communities, which include woody species such as box elder (*Acer negundo),* silver maple (*Acer saccharinum)*, cottonwood *(Poplus deltoides)*, willows *(Salix spp.)*, green ash (*Fraxinus pennsylvanica),* black walnut *(Juglans nigra),* and American elm (*Ulmus Americana)*, as well as a number of herbacous species. Both of these wetlands showed relatively good plant diversity and scored 27 and 22, respectively, using the Natural Area Rating Index.

Other waters of the United States found on the project site include Willow-Higgins Creek, Bensenville Ditch, Crystal Creek, and ponds. These creeks show the typical characteristics of urban streams, including lack of gravel substrate, straightened channels, and eroding banks. Fish and macroinvertebrate surveys of these waters generally found species that are tolerant to disturbed conditions.

Wetland Mitigation

Under each of the three build alternatives C, D, and G, 153 acres of wetlands and other waters of the United States will be filled. The wetlands to be impacted include approximately 105 acres of palustrine emergent wetland, 23 acres of palustrine scrub-shrub and forested wetland, and 27 acres of other waters of the United States, which includes the streams. In order to offset the destruction of 153 acres of wetlands and other waters, the City of Chicago (City) is proposing to create 414 acres of mitigation credits. The City is proposing to mitigate as follows:

1) for wetlands regulated by the Clean Water Act Section 404 program at a ratio of 1.5:1;
2) for isolated wetlands at a ratio of 1:1; and
3) for in-channel wetlands at a ratio of 5:1.

In general, we agree with the proposed mitigation ratios; however, we would like to see a higher mitigation ratio for the higher quality forested/scrub-shrub areas, such as NW 28 and SW15. Since it takes a considerably longer time for wooded wetland community types to become established, we recommend that these areas be mitigated in-kind at a ratio of at least 3:1.

We have an additional concern with the proposal to fill wetlands previously created as mitigation for prior wetland impacts. Once wetland mitigation is established, we expect that the site will remain wetland in perpetuity. The City has acknowledeged this issue and has proposed a higher mitigation ratio of 5:1 to offset for the 24.8 acres of impacts to previously created mitigation wetlands. The DEIS states that the mitigation for the isolated wetland impacts occurring in DuPage County will be mitigated as required by the DuPage County Ordinance. Based on the mitigation credits proposed in the DEIS, the mitigation ratio for these wetlands will be close to 2:1. The mitigation ratio for waters of the United States impacts are listed as variable; however, based on the credits proposed to offset these impacts, the mitigation ratio will be approximately 5:1.

In the DEIS, the City has committed to developing a mitigation plan that would result in the generation of 414 mitigation credits. The DEIS identifies the DuPage County West Branch Preserve as the mitigation site for wetland impacts occurring on the DuPage County portion of the airport. This site has the potential to generate between 131 and 150 credits. For the proposed impacts in Cook County, the City submitted 12 additional mitigation sites to a mitigation review team consisting of staff from federal and state agencies, including EPA. The team identified six of those sites as having the potential for successful wetland restoration work. We recommend that the City continue to work with the mitigation review team on mitigation site selection to ensure that the sites selected will result in generation of sufficient mitigation credits. We also encourage the City to consider mitigating in-kind for the impacts to the higher quality wooded communities, such as those found at NW28 and SW15. Due to the significant amount of impact to stream resources on the project site, we also suggest the City consider including stream restoration work as part of the mitigation plan.

In summary, based on our coordination with FAA, we believe that the wetlands mitigation efforts are on track. We expect additional detailed information on the proposed mitigation sites, including how hydrology will be restored, what existing conditions are, and what wetland communities will be established. When that information is received, we will be able make a determination regarding the adequacy of the proposed mitigation to offset the project impacts.

Water Quality

Discharges From "Airside" Deicing Areas

Proposed alternatives will result in a significant increase in the volume of wastewater that would need to be discharged to the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) Stickney treatment plant. The DEIS indicates that the proposed design of the detention basins for these alternatives would be adequate to accommodate these increased volumes, but it does not provide further evaluation of the increased flows or MWRDGC's ability to accept them. Based on the description provided by the FAA at our February 16, 2005 meeting, however, we understand that the MWRDGC will not approve any increase in pumping rate from expanded facilities at O'Hare. As a result, while the frequency of discharges to the Stickney treatment plant would increase, the flow rate would not increase and would thus not affect available capacity at the Stickney treatment plant. The FEIS should provide this clarification and also indicate how the discharges from the detention basins would be timed in relation to available capacity within MWRDGC's system. The FEIS should discuss any potential impacts to MWRDGC's treatment operations or combined sewer overflows, or explain why there would be no such impacts.

In cases where discharges are determined to comply with NPDES permit limits (presumably in warm weather months when no deicing is performed), flows would be discharged directly to receiving waters rather than to MWRDGC. The FEIS should discuss the environmental impact of these increased flows. While compliance with NPDES requirements may help to ensure that water quality is protected, NPDES permits do not regulate water quantity, which can impact stream habitat and cause streambank erosion. Increases in impervious areas can also lead to reductions in stream baseflow during low flow, dry weather periods, thus further stressing the aquatic community. These factors should be addressed in the FEIS.

Discharges From "Landside" Activities

The conclusion that no significant impacts will occur related to storm water discharges from other areas at the airport appears to be based on an assumption that these discharges will comply with NPDES limits. The DEIS references past instances of elevated contaminant concentrations in effluent, as well as airport improvements that have been made to try to rectify these problems. We suggest that the FEIS discuss the current compliance status for effluent limitations under O'Hare's currently effective permits, and as appropriate, activities O'Hare is carrying out now and in the future to meet its NPDES limits.

Construction activities can result in significant increases in sediment discharged to receiving waters. NPDES permits regulating construction site storm water do not typically include effluent limits, but rather require best management practices (BMPs), employed by the permittee. Even with application of best management practices, an increase in sediments can be anticipated. BMPs typically have associated design criteria (e.g., design storm for sedimentation basins), above which they will not be effective, or where their effectiveness will be reduced. The FEIS should discuss the impact of increased sedimentation on receiving waters and the BMPs to be used to mitigate these impacts.

Tables K-1, K-2, and K-3 list storm water discharges from numerous outfalls not covered under the industrial storm water permit. Given that storm water discharges from these areas have been found to include deicing materials in the past, the FEIS should discuss efforts to address this issue and clarify whether there are airport deicing activities in these areas that should be covered under the industrial storm water permit. The FEIS should also clarify if the above areas and outfalls are covered by the municipal separate storm sewer system (MS4) permit.

The DEIS states that the permit for the fuel farm area that was issued to the Airport Group International (AGI), "...has since been rolled into the Chicago Department of Aviation (DOA) - Phase I NPDES individual discharge permit application for the entire Airport." We have the following comments:

- The FEIS should describe the AGI and the relationship between AGI and the City of Chicago Department of Aviation.

- The FEIS should discuss the rationale for requesting that Illinois EPA include these discharges within the reissued DOA permit.

- The FEIS should discuss the impact of the proposed expansion alternatives on operations at, and storm water discharges from, the fuel farm. The FEIS should discuss what type of storm water treatment or BMPs are being used or proposed for use at the fuel farm. We suggest that the FEIS discuss current compliance status for this area, and as appropriate, activities O'Hare is carrying out now and in the future to address these discharges.

The DEIS states that the Des Plaines River is considered to be an Impaired/Threatened waterbody. The FEIS should discuss the pollutants for which the Des Plaines is considered Impaired/Threatened and the contribution that O'Hare makes to those impairments, if any.

Noise

Noise Impact Analysis

EPA believes that the noise analysis in the DEIS indicates that the proposed action will have a significant noise impact on people living near the airport. Each of the build alternatives predicts additional noise exposures versus the No Action Alternative. For example, the noise modeling for Alternative C shows that in 2013, 4,974 additional people will be exposed to DNL 65 dB noise levels compared to the No Action Alternative. Of that population, 440 people will be exposed to DNL 70 dB. In the Year 2018 (Build Out + 5 years), 6,266 additional people will be exposed to DNL 65 dB or more when compared to the No Build Alternative. Of that population, 1,433 people will be exposed to DNL 70 dB.

Using FAA's guidelines for evaluating land use compatibility with noise exposure (14 Part CFR 150), in the year 2013, 4,974 additional people will be living in an area that is considered "incompatible with noise levels" as compared to the No Action alternative and in the year 2018, the population will increase to 6,266 compared to the No Action alternative. In

addition, under Alternative C, a total population of 24,103 (existing exposure before the project plus new exposure due to this project) will be in an area that is considered incompatible with noise levels.

FAA Part 150 defines 1.5 dB as a significant increase in exposure for populations exposed to 65 dB or greater. Another significant threshold for noise is for receptors in the DNL 60-65 dB contour that would experience a 3.0 dB increase. In order to provide complete disclosure of noise impacts, EPA recommends that the FEIS provide documentation of the existing populations in the DNL 65 dB contour that would experience a 1.5 dB increase. The FEIS should also provide documentation of the existing population in the DNL 60-65 dB contour that would experience a 3.0 dB increase.

Noise Mitigation

The DEIS included some cursory information about the existing Fly Quiet Program (a voluntary noise abatement program that optimizes runway use, arrival/departure flight procedures, and ground run-up procedures) and the City's School Sound Insulation Program (SSIP) and Residential Sound Insulation Program (RSIP). However, the DEIS did not disclose detailed information regarding noise mitigation options. EPA recommends that the FEIS disclose a full range of mitigation options. We believe that the following recommendations would help clarify the possible options along with their effectiveness at reducing noise exposure.

- The FEIS should include an expanded discussion regarding how the Fly Quiet Program has helped to reduce noise impacts historically, and specifically how it will be used if one of the build alternatives were implemented.

- The FEIS should include a discussion of a possible voluntary residential purchase program (buy-outs), particularly for those residents located in the DNL 70 dB contour. The discussion should include the number of residences, possible time-frame and costs of the program.

- The FEIS should include an expanded section on the continuation of the City's residential sound insulation program. This section should include detailed information on the number of residences, their location, time-frame and program costs that would be eligible for sound insulation using the criteria specified by the City's Residential Sound Insulation Program (RSIP). We note that the existing sound insulation program proposes to use 2000 noise contours. The FEIS should compare the differences in the number of residences using the build out (2013) and build out +5 (2018) contours and explain what contours will be used into the future.

- The FEIS should discuss a voluntary residential sound insulation program for all residences located in DNL 65 +dB contours for both the build out (2013) and build out +5 (2018) years. The discussion should include the number of residences, time-frames and costs of the program.

- The FEIS should discuss possible noise mitigation options for schools, colleges, and libraries (that currently are not sound insulated), healthcare facilities, and places of worship that will be located in both the DNL 65+ dB contours for the build out (2013) and build out + 5 (2018) years.

- The FEIS should also discuss mitigations measures that might be used to reduce temporary noise impacts (exposure to DNL 65+ dB) that will occur during the phased construction.

- The FEIS should provide a full evaluation of noise mitigation options. From that range of options, FAA should document how mitigation will be determined and what the implementation timeframe will be. Commitments for mitigation should be made in the FEIS, if possible, or in the Record of Decision.

Environmental Justice

Environmental Justice Analysis

The project area includes a residential community, mostly in the southwest acquisition area, with a high percentage of Hispanic individuals. The FAA identifies this population as an Environmental Justice community because the total Hispanic population of Bensenville is 7,690, (37 percent of Bensenville's total population), and Hispanics make up 60 percent of the southwest acquisition area. The DEIS includes an analysis to determine if the build alternatives have the potential to cause a disproportionately high and adverse impact on minority and /or low-income populations. The DEIS documents an analysis of two impact categories, social (relocations) and noise, but it does not address all other impact categories. The DEIS is unclear whether and how the potential for disproportionately high and adverse impacts was considered for each of the impacts addressed in DEIS other than noise and social impacts. Particularly, we recommend that the topic of hazardous air pollutants should be addressed specifically in the Environmental Justice section. The FEIS should explicitly state what analysis was used for each impact category and what conclusions were reached regarding the potential for disproportionate effects to minority and/or low-income populations.

Environmental Justice Mitigation

The potential for disproportionate adverse disruption to minority communities is identified in the DEIS and is generally evaluated. However, there does not appear to be any mitigation measures specifically designed to address the disproportionate impacts on minority residents with regard to disruption of community character. As stated in Section 5.4-23, "If property is acquired, the most significant disruptions in community character would occur in and around the acquisition area. It is important to consider businesses and residents who would be relocated, as well as those who would remain in the area. Local businesses, schools, and places of worship often are the center of community activity. The proposed relocation under the Build Alternatives ... could adversely affect the community character." The City of Chicago's March 13, 2003 Draft Relocation Plan does not appear to consider the potential for disproportionate impacts to minority and low income populations, and it does not provide any mitigation measures to address such impacts. Mitigation measures to address community

disruption, including measures specific to displaced business owners, should be included in the FEIS.

Mitigation measures for acquisition/relocation do not appear to specifically address the potential for disproportionate impacts on a minority population. Section 5.21.5.1, on "Mitigation for Acquisition/Relocations," does not clearly address how administering the Uniform Relocation Act for these acquisitions/relocations will be done in order to address the *disproportionate* impacts; rather, it identifies the measures that will be employed throughout the acquisition area. The "Draft O'Hare Land Acquisition Relocation Plan" does not include measures specifically designed to address the disproportionate impact of acquisitions on minority populations and to ensure nondiscrimination under Title VI of the Civil Rights Act of 1964. We are aware of FAA's efforts to provide services that pertain to the special needs of this group, yet none of those activities are discussed in the DEIS. We recommend that FAA document their efforts in the FEIS and include the continuation of such efforts as mitigation measures to ensure that the potential for disproportionate impacts is addressed.

The environmental justice analysis concludes that there is a "potential" for a disproportionately high and adverse impact on minority populations under Alternatives C, D, and G, within both the 65 DNL area and the area that would experience a DNL 1.5dB increase within the 65 DNL area. However, Section 5.21.6.2, "Potential Noise Impacts on Environmental Justice Populations Outside of the Proposed Acquisition Areas," indicates that the FAA has not reached a determination with regard to the disproportionality of impacts and that it will make its determination based in part on potential, unspecified mitigation measures. We recommend that the FAA consider and adopt in the FEIS the following:

- Measures to ensure that the school sound insulation program and residential sound insulation program are carried out in a way that ensures proportional and timely coverage for affected minority and low-income populations.

- Measures such as provision of additional technical assistance to local jurisdictions to support rapid and efficient noise mitigation; including assistance to minimize barriers to mitigation implementation, if necessary.

Alternatives Evaluation

Overall, the DEIS does a good job of describing current conditions at O'Hare. The alternatives analysis is a comprehensive look at all non-airport and airport alternatives. The process used to screen this full range of alternatives appears appropriate. As a cooperating agency on this project, EPA has had extensive discussions with the FAA on the purpose and need for the project and the alternatives evaluation. FAA has considered the comments that we have made and adjusted the presented information accordingly. We appreciate this opportunity to learn about and influence the project at such an early stage.

The three alternatives retained for detailed evaluation are all O'Hare build alternatives: Alternative C (the City of Chicago's proposed alternative), Alternative D, and Alternative G. Each of these alternatives would include construction of new west terminal facilities and a

large-scale rearrangement of airfield roads, taxiways, and runways. Alternative C would consist of eight runways: six in an east-west orientation and two in a northeast-southwest orientation. Alternatives D would have seven runways, the same runways as Alternative C minus the southernmost east-west runway. Alternative G would have eight runways, the same as Alternative C except the southernmost east-west runway would be oriented in northwest-southeast orientation. The alternative analysis comprehensively addresses all feasible alternatives. We have provided FAA with feedback regarding the Purpose and Need for the Project and the corresponding Alternatives Analysis. We have included some minor comments on the project's purpose and need as well as alternatives analysis in this letter.

We believe that the alternatives analysis is comprehensive and appropriate for such a large-scale project as this one; however, there are places where we believe the alternatives analysis could be strengthened in order to address comments from interested or affected parties. In Sections 2.2.1.1 and 2.2.1.2, we suggest that FAA provide a summary of the recommendations developed by the 1991 and 2001 O'Hare Delay Task Force, including those that were and were not implemented and why. This is important information that helps inform the interested parties and the decision maker regarding the No Action Alternative. Also, we believe the rationale for dropping Alternative E out of the detailed analysis should be enhanced. It is clear that this alternative does not perform as well, but it also has less impact on the local tax base. FAA should expand on the rationale as to why this alternative was dropped versus the alternatives that were retained for detailed analysis. The rationale for dismissing Alternatives E, F, and the Blended Alternative all rely, in part, on inconsistencies with law. The FAA should explain more fully why an alternative is inconsistent with existing law. We recommend that these inconsistencies be explicitly stated in the FEIS.

SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION*

Environmental Impact of the Action

LO-Lack of Objections
The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS sate, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1-Adequate
The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alterative and those of the alternatives reasonably available to the project or action. No further analysis or data collecting is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information
The draft EIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment